



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,327	11/08/2001	Michael Alan Reeve	PA-0071	3254

7590 05/08/2006

Amersham Biosciences
800 Centennial Avenue
Piscataway, NJ 08855

EXAMINER

DO, PENSEE T

ART UNIT PAPER NUMBER

1641

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/007,327
Filing Date: November 08, 2001
Appellant(s): REEVE, MICHAEL ALAN

MAILED
MAY 08 2006
GROUP 1600

Royal N. Ronning, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 20, 2005.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

No amendment after final has been filed.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-3 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

4,795,698	OWEN et al.	1-1989
5,693,784	EKENBERG	12-1997
5,660,990	RAO et al.	8-1997
6,228,624	TERSTAPPEN	5-2001

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Owen et al. (US 4,795,698).

Owen teaches magnetic-polymer particles wherein the magnetic particles are magnetite (Fe₃O₄). Such magnetic polymer particles are coated with avidin. (see col. 3, lines 24-32; claim 10).

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Ekenberg (US 5,693,784).

Ekenberg teaches an agglomeration of colloidal magnetic particles coated with streptavidin. The magnetic particles are metal oxides (Fe₃O₄). (see col. 4, lines 61-65; col. 5, lines 60-65; claim 23).

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Rao (US 5,660,990).

Rao teaches magnetic particles coated with avidin or streptavidin. Magnetic particles behave as colloids and are prepared according to the methods of Owen (US

Art Unit: 1641

4,795,698). These particles are Fe₃O₄. (see col. 8, lines 45-63; col. 9, lines 1-4; col. 12, lines 16-26).

Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Terstappen (US 6,228,624).

Terstappen teaches using magnetic particles prepared by methods in US patent 4,795,698 by Owen wherein Owen teaches preparation of magnetic particles by using solution containing Fe(II) and Fe(III) and a polymer treated with a strong base in order to precipitate magnetic iron oxides such as magnetite (Fe₃O₄) in a form which in intimately combined with the polymer. Such magnetic particles are coated with avidin or streptavidin. (see col. 2, lines 41-43; col. 3, lines 50-52).

(11) Response to Argument

Applicant's arguments filed December 20, 2005 have been fully considered but they are not persuasive.

Regarding all the rejections, Applicants argue that the Office has mischaracterized the instant invention, which provides compositions comprising colloidal Fe₃O₄ particles coated with a biotin-binding protein. The particles themselves are coated with the biotin-binding protein without the need for additional coatings, resulting in particles, which have a very high-iron content. This aids the speed and efficiency of magnetic separations. In contrast, the method of Owen, Ekenberg, Rao and Terstappen provide that the magnetic particles are formed by combining iron oxide in solution with a polymer (such as a protein), or a silanized coating. These coated particles are disclosed as capable of being "tailor-made to include specific biofunctional

Art Unit: 1641

ligands useful in various...applications". As such, the particles are quite different from those of the instant invention.

Applicants have amended the claims to recite "a composition consisting essentially of..." and argued that the references cited in the previous office action are irrelevant to the amended claims. The composition in the references cited by the examiner contains an additional polymer coating or a silanized coating whereas the present invention does not.

The language "consisting essentially of" fails to exclude all the extraneous materials in a composition.

MPEP 2111.03 [R-2] states that "For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of" for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). See also > AK Steel Corp. v. Sollac, 344 F.3d 1234, 1240-41, 68 USPQ2d 1280, 1283-84 (Fed. Cir. 2003).

The additional polymer coating fails to affect the basic and novel characteristics of the present invention because such a coating is well known in the art for providing functional groups to immobilize the affinity ligand such as a streptavidin or avidin. Therefore, the references applied in the previous office action are still relevant to the claims as presented.

Furthermore, the Appellant states on page 6 of the Brief that "while Appellant is mindful that the phrase "consisting essentially of " will exclude only elements which will affects the basic and novel characteristics of the invention, Appellant respectfully

Art Unit: 1641

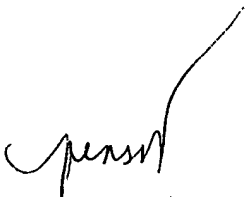
asserts that that is precisely what would occur here. Specifically, because the particles of Owen cannot have as high an iron content as that of the instant invention by virtue of the fact that Owen includes a polymer coating, Appellant asserts that the properties of the particles disclosed by Owen will be quite different from those of the instant invention and will not have the novel characteristics conferred by the higher iron content of the particles of the instant invention.

In response to the argument about the instant particles having a higher iron content, such iron content is irrelevant to the instant claims because such limitation is not recited in the present claims. Since the instant claims are drawn to a composition and as long as the prior arts have all the components of the composition, such prior arts are applicable to the present invention. Moreover, the polymer coating or silanized coating in the prior arts, as stated above, aid in the immobilization of the ligand such as streptavidin or avidin, rather than negatively affecting the formation of the composition of the present invention.

For the above reasons, it is believed that the rejections should be sustained.

Art Unit: 1641

Respectfully submitted,




Pensee T. Do
Patent Examiner
March 2, 2006

Conferees
Long Le
James Housel

Amersham Biosciences
800 Centennial Avenue
Piscataway, NJ 08855



LONG V. LE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600



JAMES HOUSEL 4/27/06
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600